

AFRICAN AMERICANS AND ASTHMA IN MISSOURI

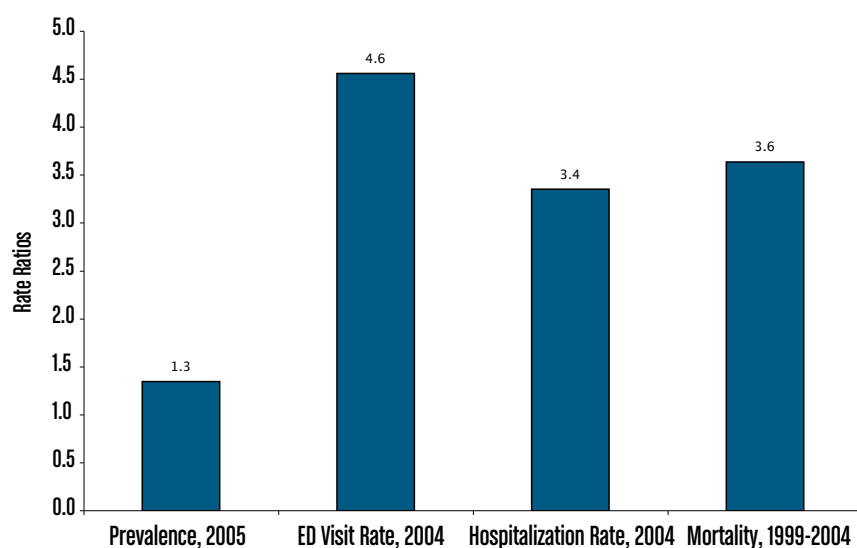
AFRICAN AMERICANS IN MISSOURI are at an increased risk of emergency department (ED) visits, hospitalizations, and deaths due to asthma compared to whites. This disparity is noteworthy because there are no significant differences in the percent of African Americans with asthma and the percent of whites with asthma. To examine this further, it is important to look at which groups within the African Americans population in Missouri are most affected by asthma as measured by ED visit rates, hospitalizations, and deaths due to asthma. The factors examined are age, sex, and geographic area for the most recent available years of data.

THE DISPARITY

- Figure 1 uses rate ratios to show how many times higher African American rates were than white rates for asthma prevalence, ED visits, hospitalizations, and deaths for the most recent available year(s) of data
- Asthma prevalence rates were about 30% higher among African Americans than whites in 2005
 - Prevalence of current asthma among adults in 2005 was 11.6% among African Americans and 8.6% among whites; this difference was not statistically significant
- Age-adjusted asthma ED visit rates were nearly five times higher among African Americans than whites in 2004
 - The difference in asthma ED visit rates by race was statistically significant
 - African Americans made up 12% of Missouri's population in 2004, but accounted for over 40% of all ED visits due to asthma
- Age-adjusted asthma hospitalization rates were over three times higher among African Americans than whites in 2004
 - The difference in asthma hospitalization rates by race was statistically significant
 - African Americans made up 12% of Missouri's population in 2004, but accounted for over 30% of all hospitalizations due to asthma
- Age-adjusted asthma mortality rates were nearly four times higher among African Americans than whites during the period 1999-2004
 - The difference in asthma death rates by race was statistically significant
 - African Americans made up roughly 12% of Missouri's population in the years 1999 through 2004, but accounted for nearly 30% of all deaths due to asthma

Figure 1

Rate Ratios of Asthma and Poor Asthma Outcomes for African Americans Compared to Whites - Missouri 1999-2005



ASTHMA AMONG AFRICAN AMERICANS IN MISSOURI

The following describes which populations within the African American community are affected by asthma the most.

Asthma Prevalence

- Based on 2004 estimates, approximately 60,000 African Americans are currently living with asthma in Missouri

Asthma Emergency Department (ED) Visits

- In 2004, there were 11,650 ED visits due to asthma among African Americans
- The age-adjusted asthma ED visit rate was higher among male African Americans than female African Americans (Table 1)
- When asthma ED visits among male and female African Americans are compared by age group, differences were observed (Figure 2):
 - Asthma ED visit rates were higher among males under 15 years of age than females of the same age; these differences were statistically significant
 - Asthma ED visit rates were higher among females 15 years of age and above, but these differences were statistically significant only for those 25 to 54 years of age
- Figure 2 also shows that asthma ED visit rates were highest among young children age 0-4 of both sexes and decreased as age increased

Asthma Hospitalizations

- In 2004, there were 2,431 asthma hospitalizations among African Americans in Missouri
- The age-adjusted asthma hospitalization rate was higher among female African Americans than male African Americans (Table 2)
- When asthma hospitalizations among male and female African Americans are compared by age group, differences were observed (Figure 3):
 - Asthma hospitalization rates were higher among males under 20 years of age than females of the same age; but this difference was only statistically significant for those 15 years of age and younger
 - Asthma hospitalization rates were higher among females 20 years of age and above; these differences were significant among those 35 years and older
- Figure 3 also shows that asthma hospitalization rates were highest among younger individuals, but were also elevated among those 35 and older, especially among females
- Asthma led to 6,203 days of hospital care among African Americans in 2004
- \$19.4 million in hospitalization charges were attributed to asthma among African Americans in 2004

Asthma Deaths

- During the period 1999-2004, there were 140 deaths due to asthma among African Americans in Missouri
- Asthma death rates were similar for male and female African Americans during the period 1999-2004
- Among African Americans, mortality rates were highest for those 65 years of age and older in 1999-2004

Table 1

Age-Adjusted Asthma Emergency Department Visits by Sex Among African Americans – Missouri 2004

Rate per 1,000		
Sex	Number	Rate
Male	5,946	15.8*
Female	5,704	15.0*
Both Sexes	11,650	15.5

*Difference between males and females was statistically significant

Table 2

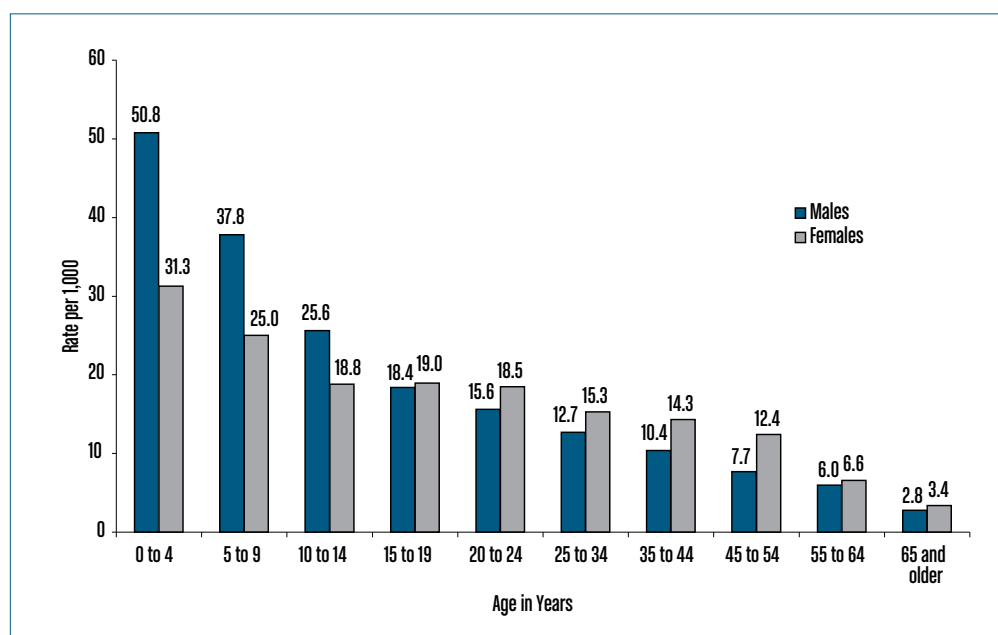
Age-Adjusted Asthma Hospitalizations by Sex Among African Americans – Missouri 2004

Rate per 10,000		
Sex	Number	Rate
Male	1,118	30.8*
Female	1,313	36.7*
Both Sexes	2,431	34.6

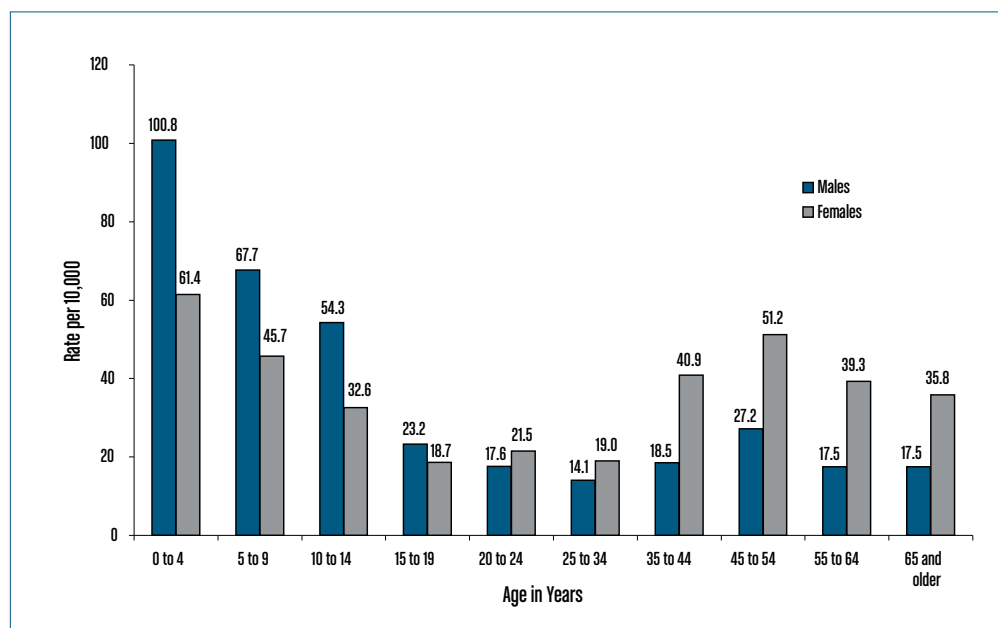
*Difference between males and females was statistically significant

Figure 2

Age-Specific Asthma Emergency Department Rates by Sex Among African Americans - Missouri 2004

**Figure 3**

Age-Specific Asthma Hospitalizations by Sex Among African Americans - Missouri 2004



GEOGRAPHIC AREAS OF INTEREST

Certain areas of Missouri have concentrated populations of African American residents. Combined, the African American residents of the Bootheel, St. Louis City, and Kansas City represent about half of Missouri's entire African American population.

The Bootheel

- The Bootheel is a six-county area in southeast Missouri that includes the following counties: Dunklin, Mississippi, New Madrid, Pemiscot, Scott, and Stoddard
- According to 2004 population estimates, African Americans made up 12% of the Bootheel's population, however, some counties in the Bootheel have greater proportions of African Americans in their populations
 - African Americans make up 20% of Mississippi County residents, 15% of New Madrid County, and 26% of Pemiscot County
- Although African Americans made up 12% of the Bootheel's population, they accounted for nearly 40% of all the asthma ED visits and 26% of the asthma hospitalizations for residents of this region

St. Louis City

- According to 2004 population estimates, African Americans made up 52% of St. Louis City's population
 - African Americans accounted for 87% of all asthma ED visits among St. Louis City residents
 - African Americans accounted for about 82% of all asthma hospitalizations among St. Louis City residents

Kansas City

- According to 2004 population estimates, African Americans made up 33% of Kansas City's population
 - African Americans accounted for over 70% of all asthma ED visits among Kansas City residents
 - African Americans accounted for about 55% of all asthma hospitalizations among Kansas City residents

DATA SOURCES

Prevalence Data 2005: Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System, 2005. Accessed June 5, 2006. <http://apps.nccd.cdc.gov/brfss/race.asp?cat=AS&yr=2005&qkey=4416&state=MO>

Prevalence Data 2004: Missouri Department of Health and Senior Services. Missouri Behavioral Risk Factor Surveillance System, 2004.

ED, Hospitalization, Death, & Population Data: Missouri Department of Health and Senior Services — Bureau of Health Informatics. Missouri Information for Community Assessment (MICA). Accessed May 2006. <http://www.health.state.mo.us/MICA/>